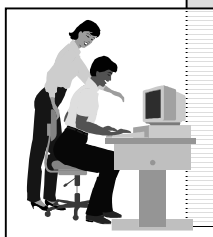
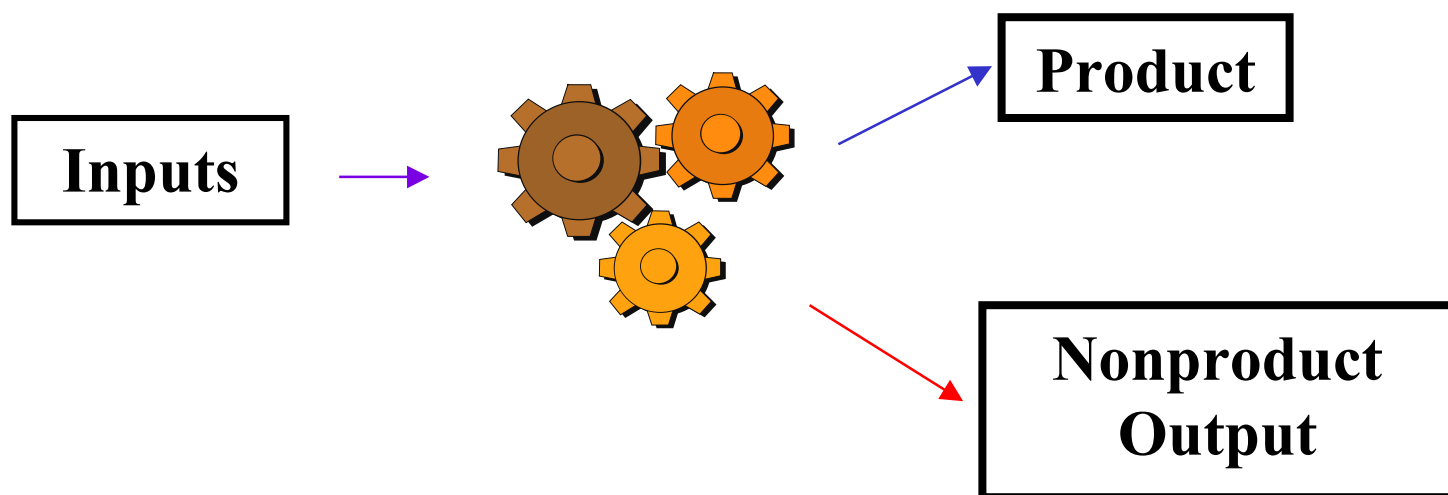




NEW JERSEY POLLUTION PREVENTION PLAN SUMMARY
FOR POLLUTION PREVENTION PLANS COVERING THE PERIOD
JANUARY 1, 2006 TO DECEMBER 31, 2010
(Form DEP-113)

REVISED 2005 INSTRUCTIONS



New Requirement!
Electronic Reporting is Mandatory
for Reporting Year 2005
and
Submission is due by
JULY 1, 2006



CHECK OUT WHAT'S NEW...

Mandatory Online Pollution Prevention Plan Summary Submittal

Pursuant to the readopted Pollution Prevention rule on August 24, 2005 (see the New Jersey Register, CITE37 N.J.R.3637), effective Reporting Year 2005, any facility required to submit the 2005 Pollution Prevention Plan Summary (P2 Plan Summary) shall submit its P2 Plan Summary electronically using the Department's online reporting website. To file 2005 P2 Plan Summary online, the facility must first complete the facility's 2005 NJ Release and Pollution Prevention Report (RPPR) online. At "***RPPR and P2 Plan Summary Folder***" the status must be "Awaiting Certification" or "Submitted."

It's quick and easy. Just follow these steps:

1. On the Internet, go to <http://www.njdeponline.com>
2. Click the **Continue** button.
3. A user ID and PIN are required for access to the e-reporting portal. If you have already used the system, you will have a User Profile and may skip to 7. below. To create an ID and pin, click on "Create New User Profile." Complete all user information. At the Add program box select "Right to Know and Pollution Prevention" and click the **Add Program(s)** button and enter your 11-digit CRTK Facility ID numbers.
4. Click the **Submit Request** button.
5. A screen will appear stating that your User Profile ID and PIN Request is granted. Click the **Continue** button.
6. Enter your User ID and PIN.
7. Click the **Login** button.
8. On the NJDEP Electronic Data Transfer Web Site, select the "Release and Pollution Prevention Report and Pollution Prevention Plan Summary" radio button and click the **Continue** button.
9. Select the facility and click the **Access Facility** button.
10. Click on the **Create New Report** button.
11. Once you have completed the RPPR, go back to the "***RPPR and Pollution Prevention Plan Summary Folder***", Click on the **Create New Report** button.
12. Enter the four-digit reporting year (i.e., 2005). Select the "***Pollution Prevention Plan Summary (Form DEP-113)***" option by choosing its radio button and click the **Continue** button.
13. Complete the 2005 P2 Plan Summary; then certify and submit it to the DEP online!

REMEMBER to print and sign a copy for your records and keep it at your site. For additional information or assistance in completing the eRPPR/ P2 Plan Summary, please call (609) 777-0518 during business hours (8:30 a.m. – 5:00 p.m.) or attend the RPPR and Pollution Prevention Planning workshop scheduled for Wednesday, April 5, 2006. A link to the course registration is available on the Web at <http://www.njgov/dep/opppc>.

NEW JERSEY POLLUTION PREVENTION PLAN SUMMARY
FOR POLLUTION PREVENTION PLANS COVERING THE PERIOD
JANUARY 1, 2006 TO DECEMBER 31, 2010
(Form DEP-113)

TABLE OF CONTENTS

I. GENERAL INFORMATION

WHAT ARE COVERED FACILITIES REQUIRED TO DO?	1
WHAT FACILITIES ARE COVERED?	1
WHAT HAZARDOUS SUBSTANCES ARE COVERED?	2
WHAT INFORMATION IS CONTAINED IN THE P2 PLAN SUMMARY?	2

II. SECTION-SPECIFIC INSTRUCTIONS

SECTION A. GENERAL FACILITY INFORMATION.....	2
SECTION B. FACILITY-LEVEL INFORMATION	4
SECTION C. PROCESS DESCRIPTION	5
SECTION D. TARGETED PROCESS INFORMATION	6

III. HOW TO SUBMIT THE 2005 P2 PLAN SUMMARY 7

APPENDIX 1 POLLUTION PREVENTION METHODS	9
APPENDIX 2 PROCESS TECHNIQUES	10

INSTRUCTIONS FOR THE
2005 NJDEP POLLUTION PREVENTION PLAN SUMMARY
FOR POLLUTION PREVENTION PLANS COVERING THE PERIOD
JANUARY 1, 2006 TO DECEMBER 31, 2010
(Form DEP-113)

**FOR QUESTIONS REGARDING THE P2 PLAN SUMMARY,
CALL THE NJDEP OFFICE OF POLLUTION PREVENTION & RIGHT TO KNOW AT:
(609) 777-0518**

WHAT ARE COVERED FACILITIES REQUIRED TO DO?

Facilities covered under the New Jersey Pollution Prevention Act are required to prepare three documents in accordance with N.J.A.C.7:1K et seq. The first is a comprehensive Pollution Prevention (P2) Plan that remains onsite at the facility. The second requirement is completion and electronic submission of the P2 Plan Summary (DEP-113). The P2 Plan Summary is, as its name indicates, a summary of the facility's Pollution Prevention Plan. Both the P2 Plan Summary and the full Pollution Prevention Plan are completed once every five years.

In addition to the five-year P2 Plan Summary, the third document that facilities are required to prepare is an annual Pollution Prevention Progress Report which is incorporated into the Release and Pollution Prevention Report (RPPR). This must be submitted to the NJDEP annually by July 1, starting the year following the submission of the P2 Plan Summary and continuing for each year of the five-year plan.

WHAT FACILITIES ARE COVERED?

Any industrial facility in New Jersey required to submit at least one Toxic Chemical Release Inventory (TRI) report to the United States Environmental Protection Agency (USEPA) under Section 313 of the federal Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. 11023) is covered under the New Jersey Pollution Prevention Act.

If the facility is covered under the New Jersey Pollution Prevention Act, the facility must prepare a five-year Pollution Prevention Plan and submit a P2 Plan Summary and an RPPR by July 1 of the reporting year. The facility is not required to submit the full Pollution Prevention Plan to NJDEP. The Pollution Prevention Plan remains onsite at the facility and is subject to inspection by NJDEP.

The owner or operator of an industrial facility who was not previously required to prepare and submit the pollution prevention planning document, but who subsequently becomes subject to the filing, shall prepare a five-year Pollution Prevention Plan and submit a P2 Plan Summary to the Department within 12 months of the submittal to the Department of RPPR, Sections A and B.

NOTE: If the facility is not required to submit a TRI report, but has submitted a TRI report or an RPPR in

the past, NJDEP should be notified of the facility's present status. It is mandatory to include a statement why the facility is no longer covered by the TRI reporting requirements and submit Section A of the Release and Pollution Prevention Report to:

NJDEP
Office of Pollution Prevention and Right to Know
P.O. Box 443
Trenton, NJ 08625-0443

WHAT HAZARDOUS SUBSTANCES ARE COVERED?

The list of hazardous substances reportable on the P2 Plan Summary is the same list as the Section 313 Toxic Chemical List that applies to the federal TRI. For electronic reporting, the system automatically limits the substances to those reported on the 2005 RPPR. If the facility manufactured, processed and/or otherwise used any of these hazardous substances in quantities of 10,000 pounds or more (with all applicable exemptions) during the base year, or above listed threshold quantities for persistent bioaccumulative toxic (PBT) chemicals, the facility must include them in the Pollution Prevention Plan and on the P2 Plan Summary. The substance list can also be found at <http://www.state.nj.us/dep/opppe/figdoc.htm>

Pursuant to N.J.A.C. 7:1K-3.1(h), if the sum of nonproduct output and quantity shipped as of in product for that hazardous substance does not exceed 500 pounds, determined from the value reported in Section B of the most current RPPR, the substance shall be exempt from P2 Planning requirements. The substance does not need to be included in the Pollution Prevention Plan. In addition, that substance does not need to be reported on the P2 Summary or the subsequent annual Progress Reports, RPPR, section C and D or P2-115. This rule does not apply to PBTs.

WHAT INFORMATION IS CONTAINED IN THE P2 PLAN SUMMARY?

The P2 Plan Summary is based on information contained in the facility's Pollution Prevention Plan. Completing the P2 Plan Summary entails lifting information directly from the Pollution Prevention Plan and entering it on the P2 Plan Summary form. There are four sections to the P2 Plan Summary:

Section A asks for general facility information.

Section B asks for information on the facility's five-year reduction goals for each covered hazardous substance at the facility.

Section C asks for information on each production process that uses covered hazardous substances or generates hazardous substances as nonproduct output (NPO). Complete one section for EACH covered production process or grouped process.

Section D asks for information on the facility's five-year reduction goals for those processes or grouped processes identified in Section C that are targeted in the pollution prevention plan. Complete one Section D for EACH targeted process or grouped process.

SECTION A. FACILITY-LEVEL ADMINISTRATIVE INFORMATION

New, Modification and Renewal Boxes: If this P2 Plan Summary is the first one ever to be submitted to the Department, check the “New” box. If this P2 Plan Summary reflects a modification to the facility’s Pollution Prevention Plan during a five-year cycle, check the “Modification” box. If this P2 Plan Summary is to be submitted for a subsequent five-year planning cycle, check the “Renewal” box. See “Frequently Asked Questions” on the Web at <http://www.nj.gov/dep/opppc/faq.pdf> to determine if modification is necessary.

- 1. Telephone and FAX Numbers:** Enter the facility’s telephone number and FAX number without punctuation.
- 2. Highest Ranking Corporate Official at Facility:** Enter the name and the position or title of the highest-ranking corporate official at this facility.
- 3. R&D and Pilot Plant Exemption:** If this facility has an approved NJ RTK Research & Development Laboratory exemption pursuant to N.J.A.C. 7:1G, it will be pre-populated here. If an exemption applies but the number does not show up here, call the Office at (609) 777-0518.
- 4.a. Total Number of Processes:** Enter the total number of processes that involve hazardous substances at the facility. These processes are the ones identified in the facility’s Pollution Prevention Plan. This number must equal the number of Section Cs in this P2 Plan Summary.
- 4.b. Number of Targeted Processes:** Facilities may target a subset of their total production processes. Facilities that do not target a subset of processes must target all of their processes. One Section D is required for each targeted process. The criterion that a facility must use for targeting is that the number of targeted processes must equal at least 90% of the total amount of hazardous substances used or generated as nonproduct output or released at the facility. Enter the number of processes or grouped processes that the facility has targeted. Be aware that all processes with PBTs must be targeted.
- 4.c. Basis for Targeting:** Enter the code “U,” “N,” “R,” or “A” to indicate whether the facility chose to target production processes that equal at least 90% of the total USE (U), generation of nonproduct output (N) or total environmental releases (R) of all hazardous substances at the facility. If a facility chooses to target all production processes, select (A) in the box.
- 5. Confidential Information:** Select “Yes” if the P2 Plan Summary contains information that the facility claims is confidential and “No” if it is not. If the facility selects “Yes”, the facility should continue completing and submitting the P2 Plan Summary online by leaving the confidential information blank on the rest of the forms. This will become a public version of P2 Plan Summary of the facility.

After submitting the public version online, the facility should print out a copy of the P2 Plan Summary and complete all the confidential information with RED ink. Pursuant to the N.J.A.C. 7:1K-1 et seq., the facility should follow the following steps in order to complete the confidential submittal: 1) every page of the confidential version should be clearly marked "CONFIDENTIAL" except for the first page which should be

marked "CONFIDENTIAL COPY"; and 2) the confidential version should be placed in a sealed envelope marked "CONFIDENTIAL" on both sides with facility name and ID number marked as well, enclosed in a second envelope for mailing which shall bear no markings indicating confidentiality, and submitted to NJDEP, Office of Pollution Prevention and Right to Know, P.O. Box 443, Trenton, NJ 08625-0443

6. **Union Representative at Facility, (if applicable):** Enter the name of the union representative, Union and Local #, and business phone number at this facility

SECTION B. FACILITY-LEVEL INFORMATION

Complete Section B data for each covered hazardous substance at the facility. These substances must be the same as those reported on the 2005 RPPR.

1. & 2. CAS number or Category number and Hazardous Substance: Click the "Add Substance" button and select all the substances listed. The covered substance name and CAS number will be automatically populated.

3 Five-Year Facility-Level NPO and USE Reduction Goals: To complete this section, refer to the facility's Pollution Prevention Plan, which must include a section on the facility's goals for reducing USE and Nonproduct Output (NPO). The facility's Pollution Prevention Plan should have produced reduction goals for both the USE and NPO of hazardous substances due to pollution prevention techniques. Record the facility-level goals here for each hazardous substance.

3.a. Five-Year Use Reduction Goal (pounds): Enter the five-year USE reduction goal in pounds for this substance from the facility's Pollution Prevention Plan. This should be the difference in pounds in the amount of the substance the facility used in the base year and the amount the facility expects to use at the end of the planning cycle (the fifth year). State the facility's reduction goal assuming constant production, that is, assuming that the facility will be producing the same quantity of product in five years as was produced in the base year. These goals should reflect planned reductions due to pollution prevention measures only. The goals should not include reductions resulting from discontinued operations or operations sent to another facility, as these measures do not qualify as pollution prevention under the statutory definition. The facility may have zero reduction goals.

3.b. Five-Year NPO Reduction Goal (pounds): Enter the five-year NPO reduction goal in pounds for this substance from the facility's Pollution Prevention Plan. This should be the difference in pounds between the amount of the substance the facility generated as NPO in the base year and the amount of NPO the facility expects to generate at the end of the planning cycle (the fifth year). State the facility's reduction goal assuming constant production, that is, assuming that the facility will be producing the same quantity of product in five years as was produced in the base year. These goals should reflect planned reductions due to pollution prevention measures only. The goals should not include reductions resulting from discontinued operations or operations sent to another facility, as these measures do not qualify as pollution prevention under the statutory definition. The facility may have zero reduction goals.

3.c. Five-Year Use Reduction Goal (percent): Enter the percentage of the base year USE that the facility plans to cut by the goal year. Find the five-year USE reduction percent goal by doing the following calculation:

$$\frac{\text{Five-year USE reduction goal (pounds)}}{\text{Base year USE (pounds)}} \times 100 = \text{Five-Year USE \% Reduction Goal}$$

3.d. Five Year NPO Reduction Goal (percent): Enter the percentage of the base year NPO that the facility plans to cut by the goal year. Find the five year NPO reduction percent goal by doing the following calculation:

$$\frac{\text{Five year NPO reduction goal (pounds)}}{\text{Base Year NPO (pounds)}} \times 100 = \text{Five Year NPO \% Reduction Goal}$$

SECTION C. PROCESS DESCRIPTION

Complete one Section C for each process or grouped process that USES, generates as NPO, or RELEASES a covered hazardous substance. The number of these sections the facility submits must equal the number the facility entered in Question 4.a. of Section A.

At the **“Sections C & D: Pollution Prevention Processes Folder”**

Process ID: Enter the identifier, defined in the facility’s Pollution Prevention Plan, to be used to refer to the process described in this Section throughout the facility’s pollution prevention reporting. The same identifier must be used in the facility’s Pollution Prevention Plan, P2 Plan Summary, and RPPR. The identifier must be unique, applying to only one process (or grouped process). The identifier may be up to 12 characters long and may consist of letters, numerals, or both. **Do not use punctuation or spaces in your process ID.**

Targeted Processes: Indicate "Yes" if this process was targeted in the facility’s Pollution Prevention Plan, otherwise indicate "No.” Remember that a facility must target any combination of processes or sources that contribute to at least 90% of the facility’s USE, NPO or releases and must include all processes with PBTs. Otherwise, all processes must be targeted.

1. Process ID: This element is pre-populated.

2.a. Process Category: Indicate whether this process or grouped process (1) manufactures a chemical, (2) manufactures an article, (3) stores and/or handles hazardous substances, or (4) treats and/or recycles (out-of-process) NPO. Complete the box for the category that best fits the process or grouped process. The storage and handling process category should be chosen when the process or grouped process is solely storage and handling. Descriptions of these categories are as follows.

Article manufacturing usually produces discrete items with an identity that is not encompassed by a specific chemical name. Chemicals used in article manufacturing are seldom consumed; they may be mixed and combined into an article, or used in some way in the production of the article, such as

in a solvent cleaner or degreasing step.

Chemical manufacturing usually combines chemical ingredients to produce a chemical product. If this process consumes (molecularly alters) a chemical, then it is almost always a chemical manufacturing process.

Storage and Handling processes generally involve storing raw materials prior to use, storing materials recycled on-site prior to use, storing wastes prior to disposal, storing final product or handling hazardous substances through transfers from one area of the facility to another. If there is a storage and handling component of the process, choose the category that fits the parent process rather than "storage and handling."

Treatment Operations involve the treatment or recycling of hazardous substances that leave a process as NPO. These operations must be identified when they use hazardous substances as part of the treatment or recycling process. Treatment and recycling processes may not be grouped together with or as part of other processes.

2.b. Mode of Operation: Indicate one mode of operation that best describes how this process is run, either batch or continuous. For Treatment/Recycling and Storage/Handling processes, select "Not Applicable."

Descriptions of the two modes of operation follow:

A **batch process** will have an identifiable beginning and end over a relatively short time frame. It will entail inputting a set amount of raw materials at the beginning and perhaps during the process to produce a set amount of product at the end. Examples include the formulation of a set quantity of a certain color pigment or a run of a particular pattern of wall covering.

A **continuous process** involves a continuous flow of raw material inputs to produce a continuous flow of outputs. An example is the production of gasoline and other fuels from crude oil.

2.c. Specific Descriptions: For each step in the process or grouped process, select the code corresponding to the most applicable descriptor. (See Appendix 2.) For instance, a process that makes adhesive tape might involve three steps: mixing an adhesive resin with a solvent, applying this mixture to paper backing, and driving the solvent from the tape with a dryer. The appropriate process descriptors would be UC1, "Mixing"; AA6, "Coating -- adhesive application"; and UA9, "Drying."

The descriptor list includes "similar to" and "other" categories. Use these only if another descriptor is inadequate to identify the process step. Augment the facility's description if necessary in the space provided, or attach a separate sheet that generically describes the step, perhaps by indicating a term not found on the list that would suffice. Select a descriptor for each discrete step until the entire process is described.

2.d. Hazardous substances used or generated by this process: Select each covered hazardous substance used or generated by this process.

3. Targeted Processes: This element is pre-populated.

4. Grouped Processes: In the Pollution Prevention Plan, the facility could have associated several processes together into a single grouped process that would be treated as a single process for the purposes of pollution prevention planning. Select "Yes" if this process is a grouped process; otherwise select "No."

SECTION D. TARGETED PROCESS INFORMATION

Complete one of these sections for each targeted production process the facility has identified in the Pollution Prevention Plan. This section summarizes 5-year USE and NPO reduction goals for each hazardous substance used in the process. Instructions for specific questions follow. The number of these sections that the facility submits must equal the number the facility entered in Question 4.b. of Section A.

1. Five-Year Reduction Goals for Hazardous Substances used in Process or Grouped Process

Use Range: After identifying each hazardous substance, select the USE range of the hazardous substance in this targeted process (0-4,999 lbs.; 5,000-9,999 lbs.; 10,000-24,999 lbs.; 25,000 - 49,999 lbs.; 50,000 lbs. or more). Remember: USE = quantity consumed + quantity shipped as (or in) product + NPO.

Five-Year Reduction Goal per Unit of Product Percent: Enter the process-level reduction per unit of product goals for each hazardous substance used or generated as NPO by this targeted process, as a percentage reduction from the base year. Include reduction goals for both USE per unit of product and NPO per unit of product.

EXAMPLE: A process that produces metal tools presently generates 100 pounds of solvent as NPO per 1000 items. The facility's Pollution Prevention Plan goal for this process is 10 pounds NPO per 1000 items; therefore the facility's NPO per unit of product goal is to move from 100/1000 (0.1) to 10/1000 (0.01). The reduction sought is a reduction from 100 pounds to 10 pounds per 1000 items, hence $[(100-10)/100]*100=90\%$. This is an NPO reduction goal of 90%.

Estimated Date of Introduction and Completion: For each technique or group of techniques associated with a specific hazardous substance, enter the estimated date when work on any of the techniques will begin and the estimated date when any of the techniques will be completed. This summarizes the facility's implementation schedule. If a technique was begun prior to the base year and implementation continues, state the date when the technique was begun.

Description of Pollution Prevention Techniques: For each substance, select the code(s) that describe the pollution prevention technique(s) the facility plans to use to reduce USE or the generation of NPO over the next five years. (See Appendix 1.) If none of the codes adequately describes the pollution prevention technique(s) the facility has chosen, enter the description to the box.

2. (Optional) Raw Material Substitution Certification: (Complete only if the facility wants to establish that raw material substitution is not feasible.) There are many pollution prevention techniques; raw material substitution is only one of them. The Pollution Prevention Act recognizes that there are situations in which a specific hazardous substance is the only raw material that will produce a desired product. Therefore, facilities may publicly establish, through a raw material substitution certification, that there is no way to

reduce the USE and/or NPO of a specific substance in a specific process through substitution of a non-hazardous substance. Facilities self-certify their own raw material substitution certification on the basis of a completed Plan. It does not, however, excuse the facility from looking for pollution prevention that does not involve raw material substitution.

To self-certify the raw material substitution certification in the P2 Plan Summary, a facility must:

2.a. Identify the hazardous substance(s) for which the certification is being made. Enter the name of one or more hazardous substances (from Question 1 of this section).

2.b. Explain why raw material substitution cannot be accomplished for the hazardous substance(s). Enter a brief narrative explanation. For instance, "This process makes PVC pipe. The hazardous substance vinyl chloride is an essential component of PVC."

III. How to submit the 2005 P2 Plan Summary

DEP regulations now require electronic submission of the 2005 P2 Plan Summary. For electronic certification and submittal, the person who is the responsible party must have his/her own User Profile set up (see page 1), with his/her own name under User Name. This will be the name that prints out for the certification. The certifier should select a PIN that is easy to remember, but that is known only to him or her.

When the P2 Plan Summary has been completed and is ready for certification and submittal, the certifying official must access the facility report by logging in with his/her own User ID and PIN, selecting the "Release and Pollution Prevention Report and Pollution Prevention Plan Summary" radio button, clicking the "Continue" button, and clicking the "Access Facility" button.

Once the facility report screen has been accessed, the certifying official will see that the Report Status is "Awaiting Certification." (If the Status is NOT "Awaiting Certification," contact the Office at the phone number below for assistance.) Click the "Certification and Submittal" button to get to the certification folder and select the report to be certified and click "Continue."

Check the appropriate boxes for the certifying statements, enter the PIN and Title of the certifier. (Note: the name of the certifying party will show up on this screen as the User ID, but will show up on the certification signature as the User Name.) Click on the "Certify" button and a screen will appear stating that "The Report certification was successful." Click "Continue" to get to the RPPR and P2 Plan Summary Folder. The Status will now be "Submitted."

Use the printer icon to the left of the Report to format the report for printing.

In the case of a confidential paper submission, (see page 5 for detail), it is required to return the completed original P2 Plan Summary to the DEP at the address below.

State of New Jersey
Department of Environmental Protection
Office of Pollution Prevention and Right To Know
Station Plaza 4, 22 S. Clinton Avenue – 3rd Floor
P.O. Box 443

Trenton, New Jersey 08625-0443

For additional assistance or any questions about completing the P2 Plan Summary, contact the DEP's Office of Pollution Prevention and Right To Know at (609) 777-0518.

Appendix 1

POLLUTION PREVENTION METHODS¹

(Adapted from EPA TRI Instructions)

Use for Section D, question 1.

Good Operating Practices

- W13 Improved maintenance scheduling, record keeping, or procedures
- W14 Changed production schedule to minimize equipment and feedstock changeovers
- W19 Other changes in operating practices

Inventory Control

- W21 Instituted procedures to ensure that materials do not stay in inventory beyond shelf life
- W22 Began to test outdated material - continue to use if still effective
- W23 Eliminated shelf-life requirements for stable materials
- W24 Instituted better labeling procedures
- W25 Instituted clearinghouse to exchange materials that would otherwise be discarded
- W29 Other changes in inventory control

Spill and Leak Prevention

- W31 Improved storage or stacking procedures
- W32 Improved procedures for loading, unloading, and transfer operations
- W33 Installed overflow alarms or automatic shutoff valves
- W35 Installed vapor recovery systems
- W36 Implemented inspection or monitoring program of potential spill or leak sources
- W39 Other spill and leak prevention

Raw Material Modifications

- W41 Increased purity of raw materials
- W42 Substituted raw materials not on the TRI list
- W49 Other raw material modifications

Process Modifications

- W51 Instituted recirculation within a process
- W52 Modified equipment, layout, or piping
- W53 Use of a different process catalyst
- W54 Instituted better controls on operating bulk containers to minimize discarding of empty containers
- W55 Changed from small volume containers to bulk containers to minimize discarding of empty containers
- W58 Other process modifications

Cleaning and Degreasing

- W59 Modified stripping/cleaning equipment
- W60 Changed to mechanical stripping/cleaning devices (from

solvents or other materials)

- W61 Changed to aqueous cleaners (from solvents or other materials)
- W63 Modified containment procedures for cleaning units
- W64 Improved drainage procedures
- W65 Redesigned parts racks to reduce dragout
- W66 Modified or installed rinse systems
- W67 Improved rinse equipment design
- W68 Improved rinse equipment operation
- W71 Other cleaning and degreasing modifications

Surface Preparation and Finishing

- W72 Modified spray systems or equipment
- W73 Substituted coating materials used
- W74 Improved application techniques
- W75 Changed from spray to other system
- W78 Other surface preparation and finishing modifications

Product Modifications

- W81 Changed product specifications
- W82 Modified design or composition
- W83 Modified packaging
- W89 Other product modifications

On-Site Recycling Processes

NOTE: On-Site Recycling is considered pollution prevention ONLY IF IN-PROCESS (See N.J.A.C. 7:1K-1.5).

- R11 Solvents/organic recovery - batch still distillation
- R12 Solvents/organic recovery - thin-film evaporation
- R13 Solvents/organic recovery - fractionation
- R14 Solvents/organic recovery - solvent extraction
- R19 Solvents/organic recovery - other
- R21 Metals recovery - electrolytic
- R22 Metals recovery - ion exchange
- R23 Metals recovery - acid leaching
- R24 Metals recovery - reverse osmosis
- R26 Metals recovery - solvent extraction
- R27 Metals recovery - high temperature
- R28 Metals recovery - retorting
- R29 Metals recovery - secondary smelting
- R30 Metals recovery - other
- R40 Acid regeneration
- R99 Other reuse or recovery

Appendix 2

PROCESS TECHNIQUES

A List:	Most Applicable to Article Manufacturing Processes	HB4	Cylinder
		HB5	Bottles or jugs (glass)
		HB6	Bottles or jugs (plastic)
AA1	Bleaching	HB7	Tote bin
AA2	Cleaning - of metal	HB8	Tank wagon
AA3	Cleaning - paint stripping	HB9	Rail car
AA4	Cleaning - of equipment	HC1	Other storage and handling
AA5	Cleaning - other		
AA6	Coating - adhesive application		
AA7	Coating - paint application	T List:	Use to Supply Additional Information if Necessary on Chemical Reactions
AA8	Coating - other		
AA9	Degreasing		
AB1	Dyeing	TA1	No reaction
AB2	Electroless plating	TA2	Acylation
AB3	Electroplating	TA3	Alkylation
AB4	Etching	TA4	Amination
AB5	Metal casting/machining	TA5	Ammonolysis
AB6	Metal treatment (other than plating)	TA6	Aromatization
AB7	Painting	TA7	Calcination
AB8	Paper manufacturing/treatment	TA8	Carboxylation
AB9	Photographic film manufacturing or processing	TA9	Combustion
AC1	Plastics molding/casting/extrusion	TB1	Condensation
AC2	Printing	TB2	Dehydration
AC3	Soldering/welding	TB3	Dehydrogenation
AC4	Stripping	TB4	Desulfurization
AC5	Tanning	TB5	Diazotination and coupling
AC6	Wood pulping/treatment	TB6	Double decomposition
AC7	Similar to	TB7	Electrolysis
AC8	Other article manufacturing	TB8	Esterification
		TB9	Fermentation
		TC1	Friedel-Crafts
C List:	Most Applicable to Chemical Manufacturing	TC2	Halogenation
CP1	Purification	TC3	Hydroformylation
CP2	Separation	TC4	Hydrogenation
CP3	Formulation/blending	TC5	Hydrolysis
CP4	Chemical synthesis	TC6	Ion exchange
CP5	Chemical breakdown	TC7	Isomerization
CP6	Chemical conversion	TC8	Neutralization
CP7	Similar to	TC9	Nitration
CP8	Other chemical manufacturing	TD1	Oxidation
		TD2	Polymerization
		TD3	Pyrolysis/cracking
		TD4	Reduction
H List:	Most Applicable to Storage and Handling	TD5	Silicate formation
HA1	Above ground tank	TD6	Sulfonation
HA2	Below ground tank (steel)	TD7	Other reaction
HA3	Below ground tank (fiberglass)		
HA4	Tank inside building	U List:	Most Applicable for Describing Unit Operations for Any Process Category
HA5	Steel drum		
HA6	Plastic drum	UA1	Absorption/adsorption
HA7	Fiber drum	UA2	Centrifugation
HA8	Can	UA3	Cleaning/degreasing
HA9	Carboy	UA4	Condensation
HB1	Silo	UA5	Crystallization
HB2	Bag	UA6	Desalting
HB3	Box		

UA7	Disintegration
UA8	Distillation
UA9	Drying
UB1	Dust collection
UB2	Evaporation
UB3	Fermentation
UB4	Filtration
UB5	Grinding/milling
UB6	Heat exchange
UB7	Humidification
UB8	Ion exchange
UB9	Melting
UC1	Mixing
UC2	Packaging
UC3	Pressurizing
UC4	Reaction
UC5	Screening
UC6	Scrubbing
UC7	Sedimentation
UC8	Separation
UC9	Settling
UD1	Soaking/wetting
UD2	Solvent extraction
UD3	Spraying/coating
UD4	Stripping
UD5	Other unit operation

Form for Any Process Category

PA1	Gas
PA2	Liquid (coherent)
PA3	Solid
PA4	Aqueous solution
PA5	Organic solution
PA6	Slurry
PA7	Sludge
PA8	Emulsion
PA9	Powder fines
PB1	Aqueous acid
PB2	Aqueous base
PB3	Metal product
PB4	Polymer mixer
PB5	Crude petroleum
PB6	Refined fuel/mixed hydrocarbon
PB7	Unrefined ore/minerals
PB8	Clay/cement
PB9	Animal byproducts
PC1	Vegetable byproducts
PC2	Wood chips/pulp/byproducts
PC3	Other phase form

E List: Use to Supply Additional Information Regarding Equipment for Any Process Category

EA1	Absorption bed
EA2	Aerator
EA3	Blower
EA4	Boiler
EA5	Centrifuge
EA6	Compressor
EA7	Condenser
EA8	Cooler
EA9	Crystalizer
EB1	Digester
EB2	Distillation Column
EB3	Dryer
EB4	Evaporator
EB5	Scrubber/stripper/extraction tower
EB6	Extruder
EB7	Filter
EB8	Flash drum
EB9	Fractioning tower
EC1	Furnace
EC2	Heat exchanger
EC3	Holding tank
EC4	Mill/grinder
EC5	Mixer
EC6	Reactor vessel
EC7	Refrigeration unit
EC8	Rinse tank
EC9	Separator
ED1	Settling tank
ED2	Other equipment

P List: Use to Supply Additional Information Regarding Phase

WASTE TREATMENT METHODS

Air Emissions Treatment

A01	Flare
A02	Condenser
A03	Scrubber
A04	Absorber
A05	Electrostatic Precipitator
A06	Mechanical Separation
A07	Other Air Emission Treatment

Biological Treatment

B11	Biological Treatment - aerobic
B21	Biological Treatment - anaerobic
B31	Biological Treatment - facultative
B99	Biological Treatment - other

Chemical Treatment

C01	Chemical Precipitation - lime or sodium hydroxide
C02	Chemical Precipitation - sulfide
C09	Chemical Precipitation - other
C11	Neutralization
C21	Chromium Reduction
C31	Complexed Metals Treatment (other than pH adjustment)
C41	Cyanide Oxidation - alkaline chlorination
C42	Cyanide Oxidation - Electrochemical
C43	Cyanide Oxidation - other
C44	General Oxidation (including disinfection) - chlorination
C45	General Oxidation (including disinfection) - ozonation
C46	General Oxidation (including disinfection) - other
C99	Other Chemical Treatment

Incineration/Thermal Treatment

F01	Liquid Injection
F11	Rotary Kiln with Liquid Injection Unit
F19	Other Rotary Kiln
F31	Two Stage
F41	Fixed Hearth
F42	Multiple Hearth
F51	Fluidized Bed
F61	Infra-Red
F71	Fume/Vapor
F81	Pyrolytic Destructor
F82	Wet Air Oxidation
F83	Thermal Drying/Dewatering
F99	Other Incineration/Thermal Treatment

Physical Treatment

P01 Equalization

P09	Other Blending	
P11	Settling/Clarification	
P12	Filtration	
P13	Sludge Dewatering (non-thermal)	
P14	Air Flotation	
ETHANOL	Oil Skimming	
P16	Emulsion Breaking - thermal	
P17	Emulsion Breaking - chemical	
P18	Emulsion Breaking - other	
P19	Other Liquid Phase Separation	
P21	Adsorption - carbon	
P22	Adsorption - ion exchange (other than for recovery/reuse)	
P23	Adsorption - resin	
P29	Adsorption - other	
P31	Reverse Osmosis (other than for recovery/reuse)	recovery/reuse)
P41	Stripping - air	
P42	Stripping - steam	
P49	Stripping - other	
P51	Acid Leaching (other than for recovery/reuse)	recovery/reuse)
P61	Solvent Extraction (other than for recovery/reuse)	recovery/reuse)
P99	Other Physical Treatment	

Solidification/Stabilization

G01	Cement Processes (including Silicates)	
G09	Other Pozzolonic Processes (including Silicates)	
G11	Asphaltic Processes	
G21	Thermoplastic Techniques	
G99	Other Solidification Process	

